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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,430	06/06/2001	Shyamkant R. Bhavsar	5047P001	8959
7590 10/28/2004				
Shyamkant R. Bhavsar 1191 Payne Drive Los Altos, CA 94024				
			EXAMINER SORRELL, ERON J	
			ART UNIT 2182	PAPER NUMBER

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,430

Applicant(s)

BHAVSAR, SHYAMKANT R.

Examiner

Eron J Sorrell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/16/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Dobecki (U.S. Patent No. 6,611,879).

3. Referring to method claims 1-3 and system claims 11-13, Dobecki teaches a method and system comprising:

configuring, within a network that includes one or more server(s), switching fabric(s), and storage devices, a plurality of cache devices to be embedded within (and thus necessarily connected to) the switching fabric (see figures 2 and 8 and lines 25-65 of column 5); and

caching data in the cache devices to make the data available to the server(s) (see lines 25-65 of column 5; note that the system interface 160 is being construed as the

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switching fabric as it performs a switching function between the server and the bank of disk drives (see figure 8)).

4. Referring to method claim 4 and system claim 14, Dobecki teaches a method and system comprising:

configuring, within a network that includes one or more server(s), switching fabric(s), and storage devices, a plurality of cache devices to be collocated (arranged side by side) with the server (see figures 2 and 8 and lines 25-65 of column 5);
and

caching data in the cache devices to make the data available to the server(s) (see lines 25-65 of column 5; Note that the system interface 160 is being construed as the switching fabric as it performs a switching function between the server and the bank of disk drives (see figure 8)).

5. Referring to method claims 5 and 6, and system claims 15 and 16, Dobecki teaches the cache devices are interconnected by a cache fabric (see item labeled 220 in figure 8) and at least one cache device is simultaneously connected to the switching fabric (see lines 25-65 of column 5; note since the cache is within the switching fabric, it is connected thereto).

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6. Referring to method claims 7 and 8, and system claims 17 and 18, Dobecki teaches the cache fabric and the switching fabric operate in conjunction with one another by sharing common control and management (see lines 45-53 of column 5; note the first and second directors control reading and writing from the cache and the switching of the messages).

7. Referring to method claims 9 and 10, and system claims 19 and 20, Dobecki teaches the cache fabric and switching fabric are merged into a single fabric (see figures 2 and 8 and lines 25-65 of column 2).

8. Referring to claim 21, Dobecki teaches a method comprising:

in a first cache device, detecting a data write to a write address from a data source coupled to a fabric in which the cache is located to a data storage unit also coupled to the fabric in which the cache is located (see paragraph bridging columns 7 and 8); and

invalidating data stored in the first cache device at an address corresponding to the write address (see lines 8-16 of column 8).

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobecki in view of Shen et al. (U.S. Patent No. 6,757,787 hereinafter Shen).

11. Referring to claim 22, Dobecki fails to teach broadcasting the write address to other distributed cache devices.

Shen teaches a method comprising broadcasting the write address to other distributed cache devices for maintaining cache coherency (see lines 17-32 of column 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method and system of Dobecki with the above teachings of Shen. One of ordinary skill in the art would have been motivated to make such modification in order to maintain proper cache coherency as suggested by Shen (see lines 17-32 of column 2).

12. Referring to claim 23, Dobecki teaches the other distributed cache devices are located in the fabric and are coupled to the first cache device through a bus (see item labeled 220 in figure 8; note the cache devices are connected indirectly through a bus and a director).

13. Referring to claim 24, Shen teaches for each of the distributed cache devices having data stored at an address corresponding to the write address, invalidating the data (see lines 17-32 of column 2).

One of ordinary skill in the art would have been motivated to modify the method Dobecki with the above teachings of Shen because Shen teaches this step ensures coherency with the cache devices (see lines 17-32 of column 2).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art as it pertains to caching data to make the data available to a server:


U.S. Patent No. 6,351,838 to Amelia teaches a network comprising a server, storage devices, a switching fabric and a cache accessible to the server.

U.S. Patent No. 6,779,003 to Midgley et al. teaches a cache collocated with a server.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 571 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KIM HUYNH
PRIMARY EXAMINER

10/22/04

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EJS

October 21, 2004